Exporting Paddlefish Products

Harvested from Tennessee's Kentucky Lake during the 2008-2009 harvest season

After reviewing the State of Tennessee's regulatory history for the management of commercially harvested paddlefish, state harvest regulations, and the scientific literature, the U.S. Fish and Wildlife Service has found it necessary to deny the issuance of CITES permits for the export of commercially-harvested paddlefish and its products from Kentucky Lake in Tennessee, during the recently completed 2008-2009 harvest season. The Division of Scientific Authority (DSA) is unable to make a non-detriment finding for these paddlefish since it appears the current level of harvest is not sustainable. A non-detriment finding is one of two findings required to issue an export permit under the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES).

Todd Stailey/Tennessee Aquarium

What is a paddlefish?

The North American paddlefish (*Polyodon spathula*) was once widely distributed throughout the Mississippi River, Gulf Coast rivers, Great Lakes, and southern Ontario waters in Canada. The species' current distribution remains fairly large, but has been reduced in comparison to its historic distribution.

Paddlefish are long-lived, and can reach ages older than 25 years. Female paddlefish reach maturity at 8-12 years depending on the river system they inhabit, and spawn only every 2-4 years. Based on a survey conducted in 2006, paddlefish populations in Tennessee are currently considered to be declining.

Paddlefish are important because they are one of three egg-bearing (roe) species in the order of sturgeons native to the United States that are allowed to be commercially exported for their eggs, which are processed into caviar. Caspian Sea sturgeon stocks, once the main source of caviar, have declined since the fall of the Soviet Union in 1991 and the subsequent lack of a centralized control of the sturgeon fishery. Since then, caviar from North American species has increased in value, and the export trade has increased in volume. The roe of paddlefish is highly prized and is marketed within the United States and exported internationally, mostly to the European Union and Japan.

What is CITES and why is a non-detriment finding required to export paddlefish and its products?

Paddlefish were listed in Appendix II of CITES in 1992. CITES is an international treaty aimed at ensuring that international trade in specimens of wild animals and plants does not threaten their survival. Under CITES, specimens of listed species are subject to certain controls when they enter international trade. All trade in CITES-listed species must be authorized through a system of permits.

Each CITES-listed species is placed in one of three Appendices, according to the degree of protection it requires. Appendix I includes those species threatened with extinction. Trade in specimens of these species is permitted only in exceptional circumstances. Appendix II includes species not necessarily threatened with extinction, but whose trade must be controlled in order to avoid utilization incompatible with survival. Appendix III contains species that are protected in at least one country which has asked the CITES Parties for assistance in controlling trade. Approximately 5,000 species of animals and 28,000 species of plants are currently protected by the treaty which has 175 CITES Parties.

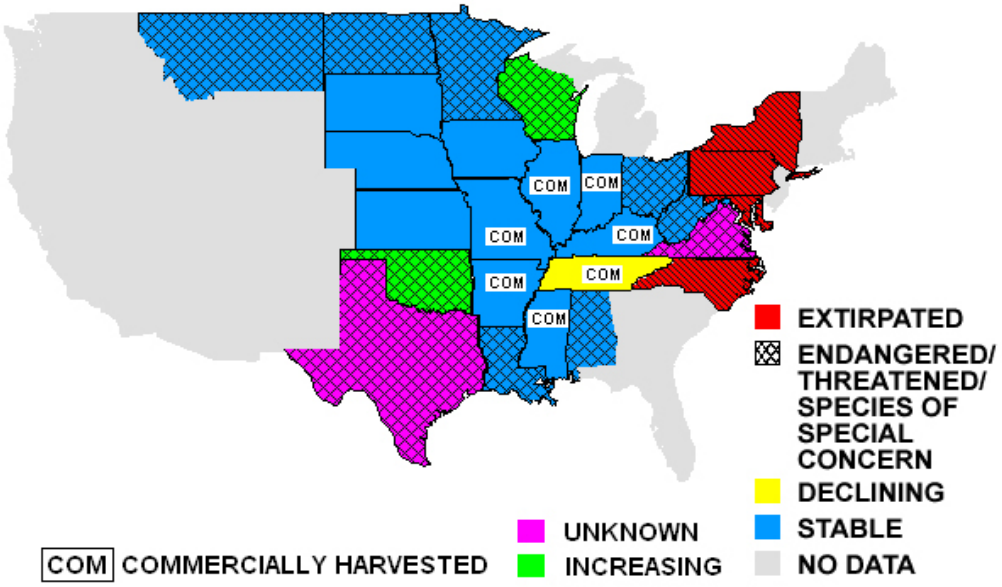
Each CITES Party, or member nation, must designate one or more Management Authorities to administer their permit system. The Management Authority is responsible for making one of the two necessary determinations required prior to issuance of a CITES permit; that specimens proposed for export were legally acquired. Member nations are also required to designate one or more Scientific Authorities to determine the biological effects of trade on the status of the species. This determination is the non-detriment finding. For the United States, the Service is the agency that administers the Management Authority and Scientific Authority responsibilities under CITES.

What actions is the Service taking and why?

Commercial harvest of paddlefish in Tennessee is managed by the Tennessee Wildlife Resources Agency (TWRA). Since 2005, all regulatory recommendations for paddlefish by TWRA were based on the results and recommendations of a scientific research study to determine the potential effects commercial fishing could have upon Tennesee's Kentucky

Paddlefish Range States and Status

Seven States currently allow commercial harvest of paddlefish: Arkansas, Illinois, Indiana, Kentucky, Mississippi, Missouri, and Tennessee. This finding affects the State of Tennessee only; separate findings will be made for the other commercially harvesting states.



Map modified from USGS using data from Bettoli, P. W., J. A. Kerns, and G. D. Scholten. in press. Status of paddlefish in the United States.

Lake paddlefish population. The Service has based its non-detriment findings on the study: *Scholten and Bettoli. 2005. Population Characteristics and Assessment of Overfishing for an Exploited Paddlefish Population in the Lower Tennessee River. Transactions of the American Fisheries Society 134: 1285-1298.*

Kentucky Lake is a mainstream impoundment of the Tennessee River, situated in western Tennessee and western Kentucky. The study was conducted as a result of the Service's concerns over the increasing number of applications submitted for caviar export permits from this impoundment. The primary results of the study indicated paddlefish were being over-harvested and 63 percent of all paddlefish roe harvested in Tennessee originated in Kentucky Lake. This commercial fishery targets the mature females in the population for their eggs. The potential for populations to decline due to over-harvest of this long-lived, slow-maturing species, is high and can be rapid. The population could take decades to rebound.

To address this problem, TWRA developed a five-year management plan to gradually increase the minimum length limit in order to protect mature female fish from harvest, and close the harvest season earlier in April. Ending the season earlier would reduce bycatch mortality of male and juvenile paddlefish that become entangled in nets and die because the water is too warm. Bycatch is discarded because it is of no commercial value. Based on implementation of the five-year management plan, and the results of the Scholten and Bettoli study, the Service has previously been able to find that the export of paddlefish and its products from Kentucky Lake in Tennessee has not been detrimental to the survival of the species.

Harvest regulations in Tennessee are reviewed and approved by the Tennessee Wildlife Resources Commission (Commission). Despite the concerns of the Service and TWRA, in November 2008, the Commission retreated from implementation of the State's five-year management plan and adopted less restrictive harvest regulations than those proposed by TWRA. The new regulations included a decrease in minimum length limit to 36 inches, which only protects 7 percent of all mature female paddlefish; and an increase in season length to April 15. These changes were a regression of the five-year management plan to a level similar to that of the 2005 season.

Under the current regulatory framework, the Kentucky Lake paddlefish population in Tennessee is not being managed in a sustainable manner and export cannot continue without a detrimental impact to paddlefish populations. Therefore, the Service is unable to make a non-detriment finding for export of paddlefish already harvested from Kentucky Lake in Tennessee, during the 2008-2009 season. Without such a non-detriment finding, CITES export permits for paddlefish products from Kentucky Lake, Tennessee will be denied. The denial of CITES export permits will not impact the sale of this caviar domestically in the United States.

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